Whither Biometrics?

A National Academies/Computer Science and Telecommunications Board Study

Joe Pato, Committee Chair

Lynette Millett, Study Director

Whither Biometrics?

Study Committee

- **Joe Pato**, HP, *Chair*
- **Genevieve Bell**, Intel
- **Bob Blakley**, IBM Tivoli
- **Jeanette Blomberg**, IBM Almaden
- **Joseph Campbell**, MIT Lincoln Laboratory
- **George Duncan**, CMU
- **Delores Etter**, U.S. Naval Academy
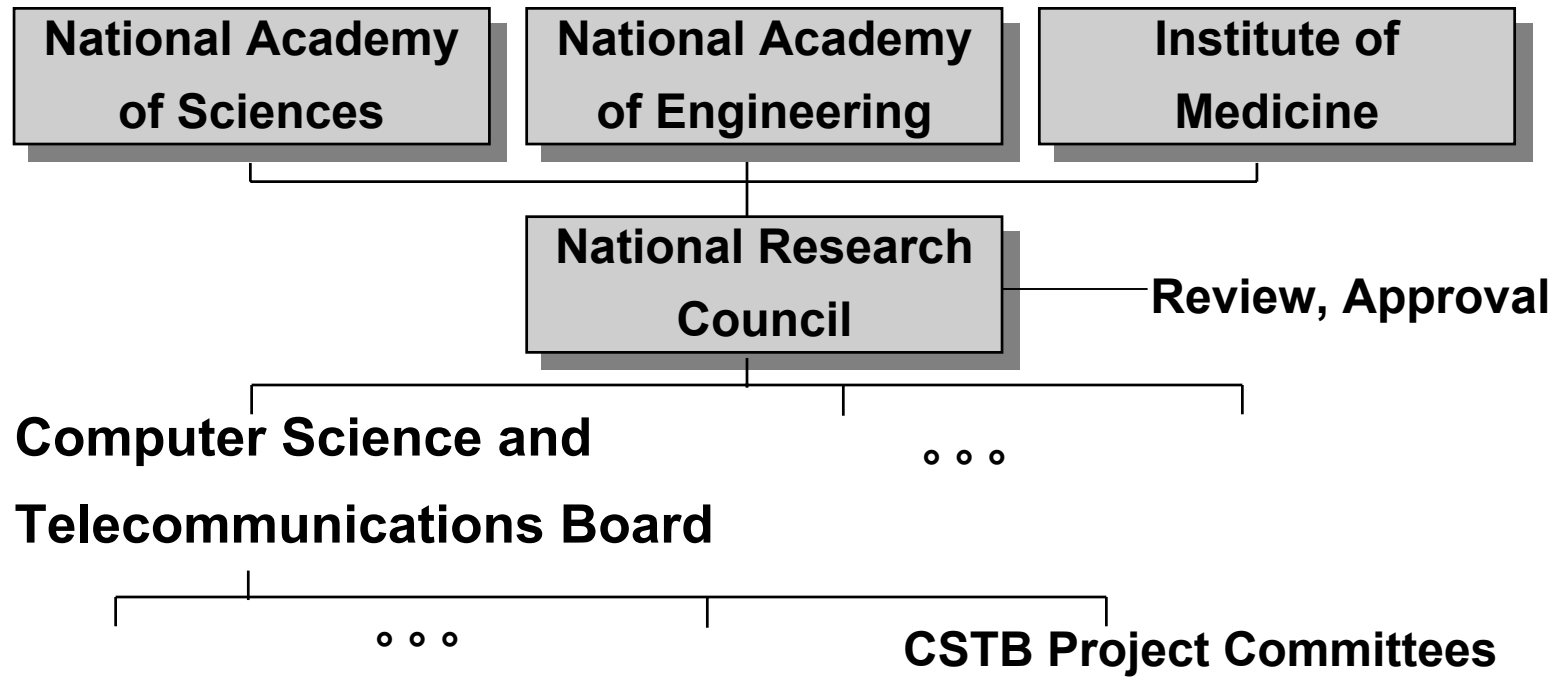- **George Fisher**, Wachovia (ret.)

- **Steven Goldberg**, Georgetown
- **Peter Higgins**, Higgins & Associates
- **Peter Imrey**, Cleveland Clinic Foundation
- **Anil Jain**, Michigan State
- **Gordon Levin**, Disney
- **Lawrence Nadel**, Mitretek
- **James Wayman**, San Jose State
- **Lynette Millett**, CSTB, *Study Director*

Introducing CSTB

- Unbiased advisers to the government and the nation on critical issues concerning IT and its place in society
- Pioneered Internet tech/policy analysis
- Excel at objective treatment of complex, controversial topics that mix technical and non-technical aspects
- Diverse portfolio of 80+ reports since 1987
    - 15+ trustworthiness (security, privacy)
    - 20+ on economic and social impacts of IT
    - 20+ on applications of IT (e.g., health, government)
    - 20+ on (tele-)communications and Internet
    - 10+ on law
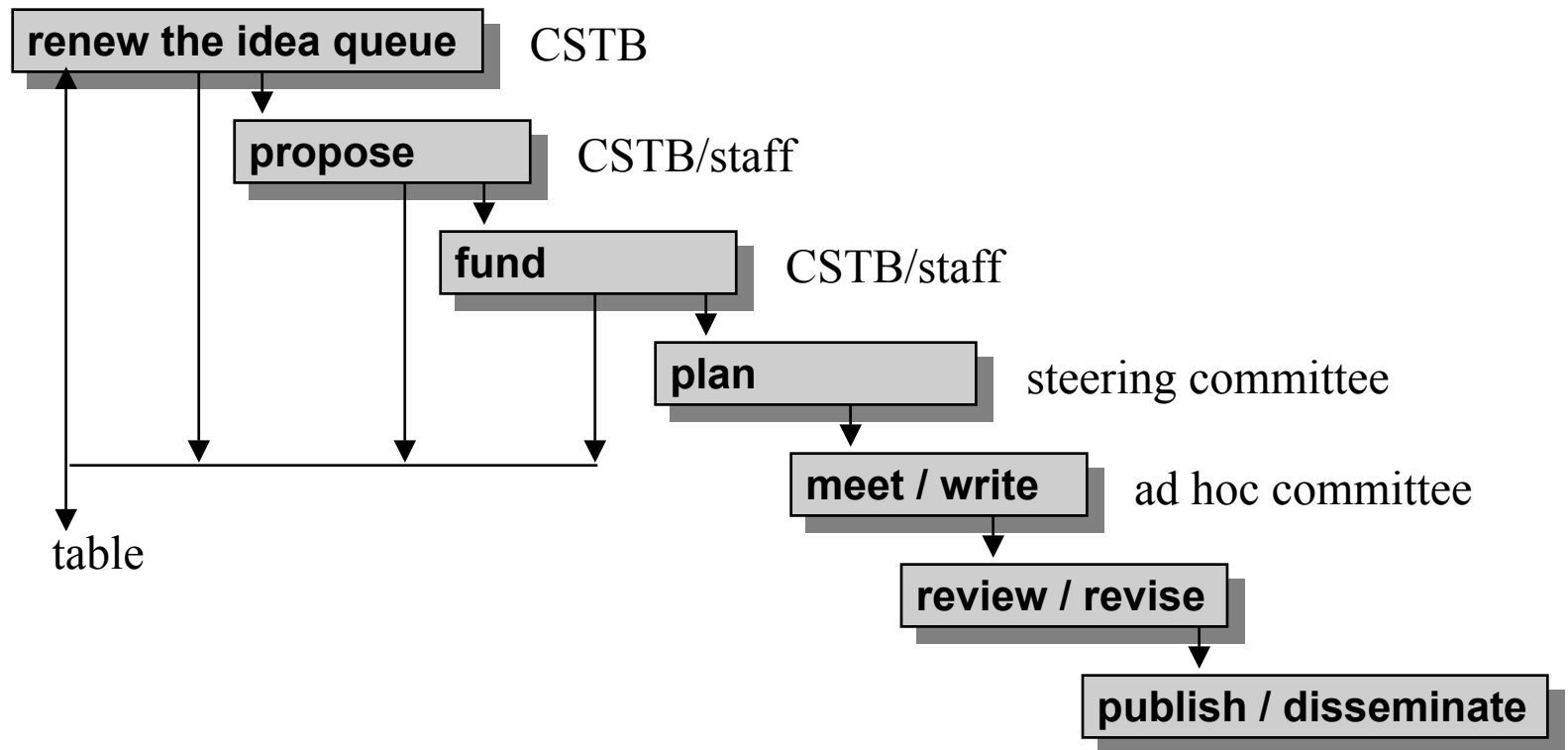   - 20+ R&D and tech trends

The National Academies

National Academy of Sciences	National Academy of Engineering	Institute of Medicine

National Research Council

Review, Approval

Computer Science and Telecommunications Board

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CSTB Project Committees

How We Operate

- Balanced group(s) of national experts
  - The Board plus its committees for projects
  - Cross-sector, cross-discipline
  - Professional staff complement
- Engage the best minds
  - Senior/authoritative—not shrinking violets
  - Cross-section of communities or views
  - Consensus development
- Study projects or special meetings
  - 1-2 years vs. < 1 year, amount of deliberation
  - Neutral meeting ground

The "Typical" Study Process

renew the idea queue — CSTB

propose — CSTB/staff

fund — CSTB/staff

plan — steering committee

meet / write — ad hoc committee

review / revise

publish / disseminate

table

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Biometrics Project Plan

- First Committee Meeting – This Fall
- Workshop: Early '05
- Workshop Report: Late Spring '05
- Continued meetings and data-gathering ….
- … to final report with **findings** and **recommendations**

- **Two reports + a workshop + several public open sessions**

Study Plan

- Currently creating study plan
  - Policy context
  - Technical context

- Soliciting input
  - **What questions should we address?**
  - **Who should we hear from?**

Current Study Directions

- **Assessment of State of the Art**
  - What are the current and near-term capabilities and limitations?
  - What are the appropriate metrics across and within systems?
  - What are appropriate testing methodologies?
  - What inhibits broader employment of biometric technologies?

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Current Study Directions

- **Use Principles**
  - How best to integrate biometrics into classes of systems?
  - What application and security domains are best addressed by biometric techniques?
  - What are the key usability, interface, social and human factors issues related to biometrics? How might we address these?
  - Do we understand vulnerabilities sufficiently and in context?

THE NATIONAL ACADEMIES
Advisers to the Nation on Science, Engineering, and Medicine

Current Study Directions

- **Research Agenda**
  - What are the most significant open problems?
  - How do we encourage and sustain cross-disciplinary engagement?
  - Is the current research infrastructure adequate?
  - How much R and how much D is needed?
  - To what extent should biometrics research be funded by federal spending – and by which agencies?

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Follow-up:

- Submit suggestions for the study
- For more on the project:
  - **cstb.org/project_biometrics**
- Contact staff:
  - lmillett@nas.edu; 202 334 2605

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